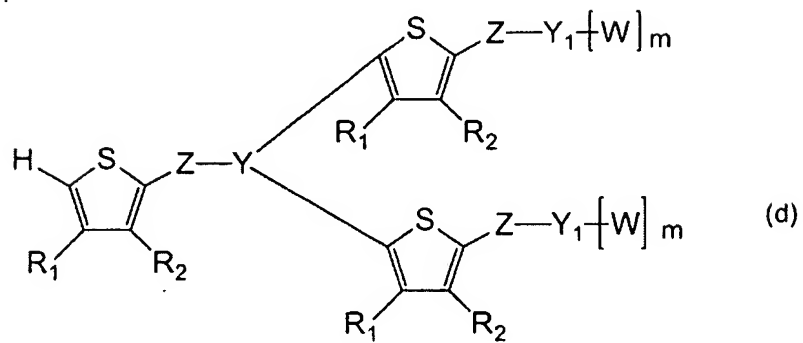
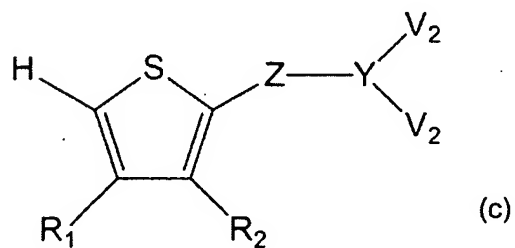
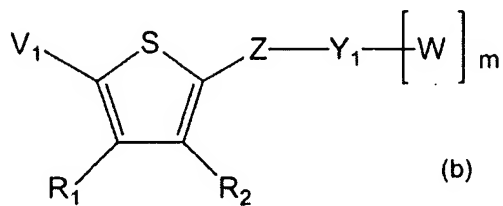
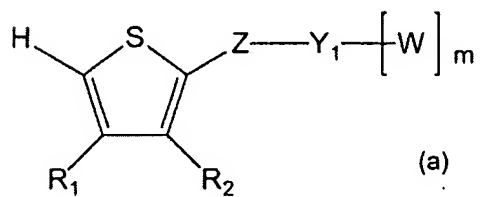
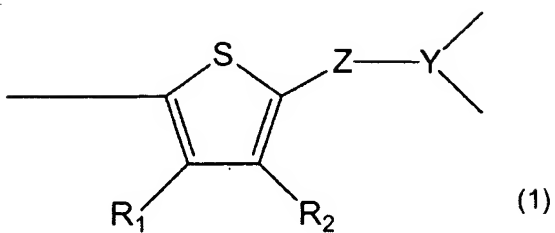


### Amendments to the Claims

This is a complete listing of claims and supersedes all other listings:

1. (Currently amended) A method for producing a dendrimer having a structural repeating unit which is represented by formula (1) and which contains a linear portion including a thienylene moiety and a branch portion Y formed of an optionally substituted trivalent organic group, the method being based on the convergent method, characterized in that the method comprises reaction step 1 of converting  $\alpha$ -position hydrogen of the thiophene ring of a thienylene-moiety-containing compound (a) for forming end moieties to an active group  $V_1$  which undergoes Suzuki cross-coupling reaction, to thereby form compound (b) ; reaction step 2 of subjecting a compound (c) to Suzuki cross-coupling reaction with the compound (b) to thereby yield compound (d) , the compound (c) having a linear portion and a branch portion Y and having, at the branch portion Y, two active groups  $V_2$  which undergo Suzuki cross-coupling reaction with the active group  $V_1$  reaction step 3 of converting  $\alpha$ -position hydrogen of the thiophene ring of the thus-formed compound to an active group  $V_1$  which undergoes Suzuki cross-coupling reaction, and reacting the compound (c) with the active group  $V_2$ , to thereby form a dendron of a subsequent generation; and a step of repeating the reaction step 3 in accordance with needs, to thereby form a dendrimer:



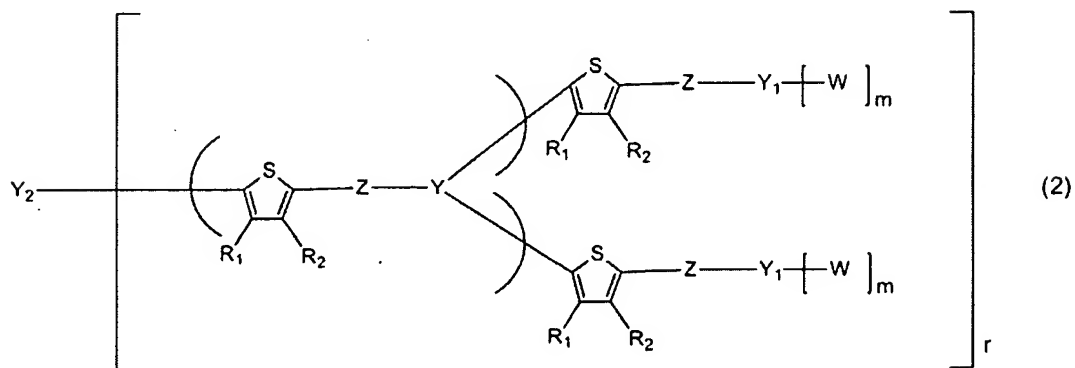
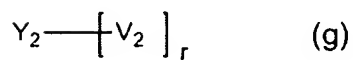
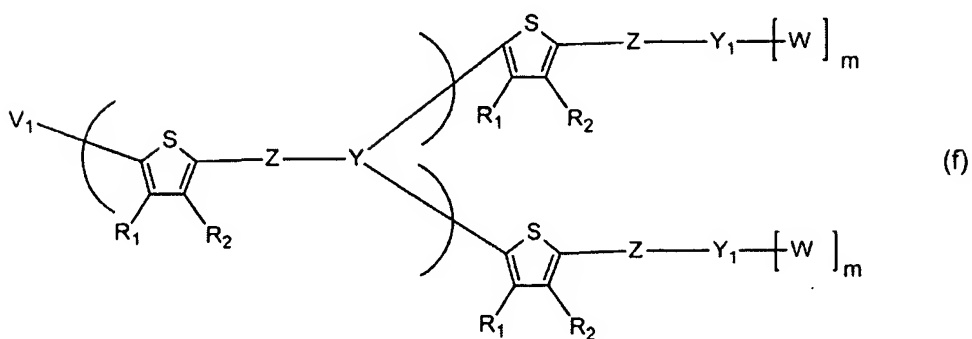
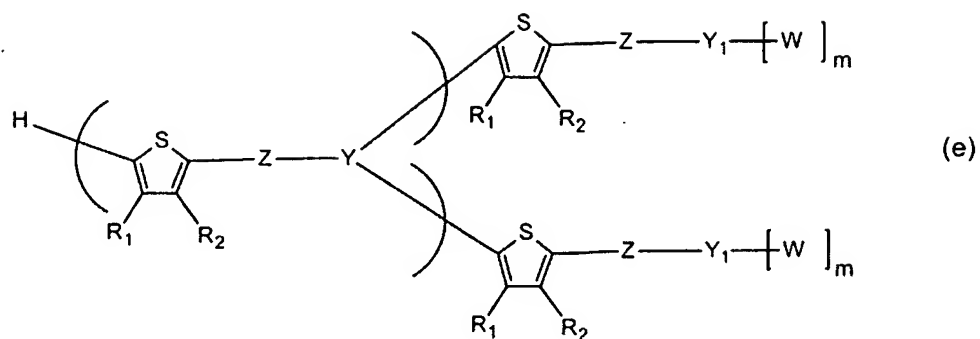
(wherein Z represents a single bond or an optionally substituted divalent organic group having no active group; each of R<sub>1</sub> and R<sub>2</sub> is selected from among a hydrogen atom, an alkyl group, and an alkoxy group; Y represents an optionally substituted trivalent organic group; Y<sub>1</sub> is identical to Y or represents an organic group having a skeleton identical to that of Y; W may be absent or represents an optionally substituted monovalent organic group having no active group; m is an integer of 0 or more; and each of V<sub>1</sub> and V<sub>2</sub> serving as active groups is selected from active groups which undergo Suzuki cross-coupling reaction, V<sub>1</sub> and V<sub>2</sub> being able to be mutually cross-coupled, and wherein V<sub>1</sub> is -B(OH)<sub>2</sub> and V<sub>2</sub> is -Br).

2. (Canceled)

3. (Canceled)

4. (Previously presented) A method for producing a dendrimer according to claim 1, wherein, in the case where a compound used in the Suzuki cross-coupling reaction is a thiophene organic boron compound containing boron, the thiophene organic boron compound is gradually added in a continuous or intermittent manner to a reaction system containing the other counterpart compound, thereby performing Suzuki cross-coupling reaction.

5. (Previously presented) A method for producing a denrimer according to claim 1, which further includes a reaction step of converting  $\alpha$ -position hydrogen of the thiophene ring of a compound (e) produced through singly or repeatedly carrying out the reaction step 3 to an active group V<sub>1</sub>, to thereby form a compound (f) ; and a reaction step of reacting the compound (f) with a compound (g) having Y<sub>2</sub> serving as a core, to thereby form a compound represented by formula (2):



(wherein  $Y_2$  represents an  $r$ -valent organic group, and  $r$  is an integer of 1 or more)

U.S. Patent Application No.: 10/521,689  
Filing Date: 21 July 2005  
First Named Inventor: Satoru Obara

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (Canceled)

10. (Canceled)